

1 **Amendment to the Claims**

2 **In the Claims:**

3 Please cancel Claims 3 and 28-51.

4 Please amend Claims 1, 2, 4-7, 12, 21-24, and 27, and add new Claims 52 and 53 as follows:

5 1. (Currently Amended) A medical simulator for training ultrasound operators to perform
6 cranosynotosis screenings using medical ultrasound, comprising a substantially life size model of a
7 human head, said model being at least in part fabricated from a first material, said model including at
8 least one simulated patent skull suture being at least in part fabricated from a second material, said
9 second material comprising at least one of a solid and a semi-solid, an echogenicity of said second
10 material being substantially different than an echogenicity of said first material, such that each
11 simulated patent skull suture ~~enabling the simulated patent skull suture to be readily distinguishable~~
12 can be readily distinguished in an ultrasound image of said model.

13 2. (Currently Amended) The medical simulator of Claim 1, wherein ~~said model is at least in~~
14 ~~part fabricated from a first material, and~~ each simulated patent skull suture comprises an opening
15 formed in said first material, such that the second material at least partially fills the opening.

16 3. (Cancelled)

17 4. (Currently Amended) The medical simulator of ~~Claim 3~~ Claim 1, wherein the second
18 material is hypoechoic.

19 5. (Currently Amended) The medical simulator of ~~Claim 3~~ Claim 1, wherein the
20 echogenicity of the second material is lower than the echogenicity of the first material, such that in an
21 ultrasound image of the model, portions of the model corresponding to the first material appear
22 ~~brighter in contrast than~~ relatively bright and portions of the model corresponding to the second
23 material appear relatively dark.

24 6. (Currently Amended) The medical simulator of ~~Claim 3~~ Claim 1, wherein a the model
25 includes a scalp portion in which each simulated skull suture is disposed, such that the scalp portion
26 of the model is covered with a layer of the second material, the second material extending beyond the
27 opening in the first material and covering at least a portion of the first material, to prevent the
28 simulated patent skull suture from being identified tactilely.

29 7. (Currently Amended) The medical simulator of ~~Claim 3~~ Claim 1, wherein the second
30 material comprises a mixture of a starch and a glue.

- 1 8. (Original) The medical simulator of Claim 7, wherein the glue is a casein-based glue.
- 2 9. (Original) The medical simulator of Claim 7, wherein the glue is a synthetic resin-based
- 3 glue.
- 4 10. (Original) The medical simulator of Claim 2, wherein at least one simulated patent skull
- 5 suture corresponds to at least one of a simulated patent coronal skull suture and a simulated patent
- 6 lambdoid skull suture, and wherein each opening corresponding to a simulated patent coronal skull
- 7 suture is beveled, and each opening corresponding to a simulated patent lambdoid skull suture is
- 8 beveled.
- 9 11. (Original) The medical simulator of Claim 2, wherein at least one opening corresponding to a
- 10 simulated patent skull suture corresponds to at least one of a simulated patent sagittal skull suture and a
- 11 simulated patent metopic skull suture, so that opposed walls of each opening corresponding to a simulated
- 12 patent sagittal skull suture exhibit an end-to-end configuration, and opposed walls of each opening
- 13 corresponding to a simulated patent metopic skull suture exhibit an end-to-end configuration.
- 14 12. (Currently Amended) The medical simulator of ~~Claim 3~~ Claim 1, further comprising at
- 15 least one simulated fused skull suture.
- 16 13. (Original) The medical simulator of Claim 12, wherein each simulated fused skull suture
- 17 comprises said first material.
- 18 14. (Original) The medical simulator of Claim 12, wherein each simulated fused skull suture
- 19 comprises an opening formed in said first material, each opening corresponding to a simulated fused skull
- 20 structure being filled with a third material, an echogenicity of the third material being substantially
- 21 distinguishable from the echogenicity of the second material, so that each opening corresponding to a
- 22 simulated fused skull suture can be readily distinguished from an opening corresponding to a simulated
- 23 patent skull suture in an ultrasound image of said model.
- 24 15. (Original) The medical simulator of Claim 14, wherein the echogenicity of the third
- 25 material is substantially similar to the echogenicity of the first material, such that in an ultrasound
- 26 image of the model, portions of the model comprising the first material are not readily distinguishable
- 27 from portions of the model comprising the third material.
- 28 16. (Original) The medical simulator of Claim 14, wherein the third material comprises a
- 29 synthetic elastomer.

30 ///

1 17. (Original) The medical simulator of Claim 16, wherein the synthetic elastomer comprises
2 dimethyl siloxane, hydroxy-terminated polymers, and silica.

3 18. (Original) The medical simulator of Claim 12, further comprising an opaque layer
4 configured to cover each simulated patent skull suture and each simulated fused skull suture, so that a
5 trainee cannot readily visually determine whether a specific skull suture is patent or fused by visually
6 inspecting the model.

7 19. (Original) The medical simulator of Claim 1, further comprising an opaque layer
8 configured to cover a scalp portion of the model, so that a trainee cannot readily visually locate each
9 simulated patent skull suture by visually inspecting the model.

10 20. (Original) The medical simulator of Claim 1, wherein a doll's head is utilized for the
11 substantially life size model of a human head.

12 21. (Currently Amended) A medical simulator adapted to be used to train ultrasound
13 operators to perform craniosynotosis screenings using medical ultrasound, comprising a substantially
14 life size model of a human head, said model including at least one opening corresponding to a
15 simulated patent skull suture, ~~wherein a difference in the echogenicity of each at least one opening~~
16 ~~relative to the echogenicity of portions of the model not corresponding to a simulated patent skull~~
17 ~~suture enables~~ each such opening being filled with a solid or semi-solid hypoechoic material to
18 enhance a difference in an echogenicity of the simulated skull suture relative to that of portions of the
19 model not corresponding to the simulated patent skull suture, the difference enabling each simulated
20 patent skull suture to be identified in an ultrasonic image.

21 22. (Currently Amended) The medical simulator of Claim 21, wherein ~~each simulated patent~~
22 ~~skull suture is filled with a hypoechoic material to enhance the difference in the echogenicity of the~~
23 ~~simulated skull suture relative to that of portions of the model not corresponding to a simulated patent~~
24 ~~skull suture~~ when the medical simulator is imaged using ultrasound, the hypoechoic material
25 produces a relatively dark image, whereas adjacent portions of the model produce a relatively bright
26 image, such that each simulated patent skull suture appears in the ultrasound image as a relatively
27 dark area surrounded by relatively brighter areas.

28 ///

29 ///

30 ///

1 23. (Currently Amended) The medical simulator of Claim 21, wherein said model is
2 fabricated from a first material, ~~and such that the solid hypoechoic material filling~~ each opening
3 corresponding to a simulated patent skull suture ~~is filled with~~ represents a second material, an
4 echogenicity of the second material being substantially different than the echogenicity of the first
5 material, so that each opening corresponding to a simulated patent skull suture can be readily
6 distinguished from the first material in an ultrasound image of said model.

7 24. (Currently Amended) The medical simulator of Claim 23, wherein the echogenicity of
8 the second material is lower than the echogenicity of the first material, such that in an ultrasound
9 image of the model, portions of the model comprising the first material will appear ~~brighter in~~
10 ~~contrast than~~ relatively bright, while portions of the model comprising the second material will
11 appear relatively dark.

12 25. (Original) The medical simulator of Claim 23, further comprising at least one opening
13 corresponding to a fused skull suture, each opening corresponding to a simulated fused skull suture
14 being filled with a third material, an echogenicity of the third material being substantially different
15 than the echogenicity of the second material, so that each opening corresponding to a simulated fused
16 skull suture can be readily distinguished from an opening corresponding to a simulated patent skull
17 suture in an ultrasound image of said model.

18 26. (Original) The medical simulator of Claim 21, wherein:

19 (a) each opening corresponding to a simulated patent skull suture intended to
20 represent a patent coronal skull suture is beveled;

21 (b) each opening corresponding to a simulated patent skull suture intended to
22 represent a patent lambdoid skull suture is beveled;

23 (c) each opening corresponding to a simulated patent skull suture intended to
24 represent a patent sagittal skull suture is formed such that opposed walls of the opening exhibit an
25 end-to-end configuration; and

26 (d) each opening corresponding to a simulated patent skull suture intended to
27 represent a patent metopic skull suture is formed such that opposed walls of the opening exhibit an
28 end-to-end configuration.

29 ///

30 ///

1 27. (Currently Amended) An ultrasound trainer configured to train ultrasound operators to
2 perform craniosynotosis screenings using medical ultrasound; comprising a substantially life size
3 model of a human head, said model including at least one simulated patent skull suture and at least
4 one simulated fused skull suture, an echogenicity of each simulated patent skull suture enabling the
5 simulated patent skull suture to be readily distinguishable from each simulated fused skull suture in
6 an ultrasound image of said model, such that each simulated patent skull suture will appear dark in
7 such an ultrasound image, and each simulated fused skull suture will appear bright in such an
8 ultrasound image.

9 Claims 28-51. (Canceled)

10 52. (New) A medical simulator for training ultrasound operators to perform craniosynotosis
11 screenings using medical ultrasound, comprising a substantially life-size model of a human head, said
12 model including two eyes, a mouth, two ears, and at least one simulated patent skull suture, an
13 echogenicity of each simulated patent skull suture enabling the simulated patent skull suture to be
14 readily distinguishable in an ultrasound image of said model.

15 53. (New) A medical simulator for training ultrasound operators to perform craniosynotosis
16 screenings using medical ultrasound, comprising a substantially life size model of a human head, said
17 model including at least one simulated patent skull suture, an echogenicity of each simulated patent
18 skull suture enabling the simulated patent skull suture to be readily distinguishable in an ultrasound
19 image of said model, such that each simulated patent skull suture will appear dark in such an
20 ultrasound image, whereas adjacent portions of said model will appear bright in such an ultrasound
21 image.